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Opuscula Philolichenum

small works in the field of lichenology

EDITOR:

JAMES C. LENDEMER
Cryptogamic Herbarium
Institute of Systematic Botany
The New York Botanical Garden
Bronx, NY 10458-5126, U.S.A.
e-mail: jlendemer@nybg.org

ASSOCIATE EDITORS:

KERRY KNUDSEN
The Herbarium
Dept. of Botany & Plant Sciences
The University of California, Riverside
Riverside, CA 92521-0124, U.S.A.
e-mail: kk999@msn.com

CALEB A. MORSE
R.L. McGregor Herbarium
Division of Botany
Biodiversity Research Center, University of Kansas
2045 Constant Ave., Lawrence, KS 66047, U.S.A.
e-mail: cmorse@ku.edu

MISSION

Opuscula Philolichenum is intended to serve as a venue for the publication of small works in the field of lichenology (including lichenicolous fungi and non-lichenized fungi traditionally treated with lichens). The central goal of the journal is to provide timely publication, in a professional format, free of charge to authors and readers. While the journal focuses on topics relating to the lichen biota of North America this is by no means exclusive and manuscripts on other topics will be considered as the table of contents of the present issue clearly illustrates.

Authors wishing to submit a manuscript for publication in *Opuscula Philolichenum* should contact the editor prior to submission to confirm that the paper conforms to the mission of the journal (outlined above). Manuscript submissions should be left unformatted and authors should consult a recent issue of *Opuscula Philolichenum* for style. All submissions are subjected to review by at least two peer reviewers and, following acceptance are formatted by the editor.

NOTICE FROM THE EDITOR

When this journal began publication eight years ago it was among the first serials to take advantage of the internet when publishing new botanical nomenclatural acts. The journal was conceived as a primarily electronic one, available on-line free of charge (at http://sweetgum.nybg.org/philolichenum/), with a limited print run to satisfy the requirements for effective publication established under the *International Code for Botanical Nomenclature*. Since that time we have continued to publish the journal in this manner, printing one or two issues a year, with each issue consisting of between one and two hundred pages.

In 2004 we could not have foreseen the revolutionary changes that took place at the 18th International Botanical Congress in Melbourne. There the Nomenclature Section voted to allow electronic only publication of new nomenclatural acts beginning 1January2012 (see Knapp et al. (2011), in this volume). In response to this change and effective immediately, *Opuscula Philolichenum* will no longer continue to produce hardcopy. Although a single printed copy will continue to be deposited in the library of The New York Botanical Garden. Also effective immediately, *Opuscula Philolichenum* will change how volumes are organized and published. Moving to an electronic only model eliminates the primary impediment preventing rapid publication. Thus, beginning with this volume, each volume will consist of multiple numbers with the numbers published as manuscripts are submitted, reviewed, accepted, and finalized for publication.

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Changes to publication requirements made at the XVIII International Botanical Congress in Melbourne - what does e-publication mean for you?

SANDRA KNAPP[1]*, JOHN MCNEILL[2] AND NICHOLAS J. TURLAND[3]

ABSTRACT. – Changes to the *International Code of Botanical Nomenclature* are decided on every 6 years at Nomenclature Sections associated with International Botanical Congresses (IBC). The XVIII IBC was held in Melbourne, Australia; the Nomenclature Section met on 18-22 July 2011 and its decisions were accepted by the Congress at its plenary session on 30 July. Several important changes were made to the *Code* as a result of this meeting that will affect publication of new names. Two of these changes will come into effect on 1 January 2012, some months before the Melbourne *Code* is published. Electronic material published online in Portable Document Format (PDF) with an International Standard Serial Number (ISSN) or an International Standard Book Number (ISBN) will constitute effective publication, and the requirement for a Latin description or diagnosis for names of new taxa will be changed to a requirement for a description or diagnosis in either Latin or English. In addition, effective from 1 January 2013, new names of organisms treated as fungi must, in order to be validly published, include in the protologue (everything associated with a name at its valid publication) the citation of an identifier issued by a recognized repository (such as MycoBank). Draft text of the new articles dealing with electronic publication is provided and best practice is outlined.

[[To encourage dissemination of the changes made to the International Code of Nomenclature for algae, fungi, and plants, this article will be published in *BMC Evolutionary Biology, Botanical Journal of the Linnean Society, Brittonia, Cladistics, MycoKeys, Mycotaxon, New Phytologist, North American Fungi, Novon, Opuscula Philolichenum, PhytoKeys, Phytoneuron, Phytotaxa, Plant Diversity and Resources, Systematic Botany* and *Taxon*.]]

INTRODUCTION

At the XVIII International Botanical Congress in Melbourne, Australia, in July 2011, two important changes were made to the *International Code of Botanical Nomenclature* (now the *International Code of Nomenclature for algae, fungi, and plants*) that will take effect from 1 January 2012. These changes will affect everyone who publishes names governed by this *Code*. As the Melbourne *Code* will not be published until approximately mid-2012, we felt it would be helpful to outline these changes, particularly those concerning effective publication in electronic media (in Articles 29, 30, and 31). For a concise report on all the changes to the *Code* accepted in Melbourne, see [1].

A draft wording of the revised Articles, Notes, and Recommendations on effective publication is provided to aid editors and publishers in establishing best practice for implementing this aspect of the *Code*. We also outline here what these changes do *not* mean, to guide those wishing to publish new names and typifications by electronic means. We urge readers to consult the report of the Special Committee on Electronic Publication accompanying the changes proposed before the Congress [2], wherein the reasoning for the changes now accepted into the *Code* is set out.

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[1] SANDRA KNAPP (***corresponding author**) – Department of Botany, The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. – e–mail: s.knapp@nhm.ac.uk
[2] JOHN MCNEILL — Royal Botanic Garden, Edinburgh, 20A Inverleith Row, Edinburgh EH3 5LR, U.K.
[3] NICHOLAS J. TURLAND — Missouri Botanical Garden, PO Box 299, St. Louis, MO 63166-0299, U.S.A.

DRAFT WORDING OF REVISED ARTICLES 29, 30, AND 31 AND RECOMMENDATIONS 29A, 30A, AND 31A

Here we reproduce the wording of all of the relevant Articles, Notes, and Recommendations (omitting the Examples), with the changes highlighted in **bold**. The wording here is provisional, pending the meeting of the Editorial Committee in December 2011 to finalize the printed version of the Melbourne *Code*.

Article 29

29.1. Publication is effected, under this *Code*, by distribution of printed matter (through sale, exchange or gift) to the general public or at least to botanical institutions with libraries accessible to botanists generally. **Publication is also effected by electronic distribution of material in Portable Document Format (PDF; see also Art. 29.3 and Rec. 29A.1) in an online publication with an International Standard Serial Number (ISSN) or an International Standard Book Number (ISBN).** Publication is not effected by communication of new names at a public meeting, by the placing of names in collections or gardens open to the public, by the issue of microfilm made from manuscripts, typescripts or other unpublished material, or by distribution electronically **other than as described above**.

***29.2.* For the purpose of this Article, "online" is defined as accessible electronically via the World Wide Web.**

***29.3.* Should Portable Document Format (PDF) be succeeded, a successor international standard format communicated by the General Committee (see Div. III) is acceptable.**

***29.4.* The content of a particular electronic publication must not be altered after it is first issued. Any such alterations are not themselves effectively published. Corrections or revisions must be issued separately to be effectively published.**

Recommendation 29A

[Existing Recommendation replaced by the following:]

***29A.1.* Publication electronically in Portable Document Format (PDF) should comply with the PDF/A archival standard (ISO 19005).**

***29A.2.* Authors should preferably publish in publications that are archived, satisfying the following criteria as far as is practical (see also Rec. 29A.1):**

***(a)* The material should be placed in multiple trusted online digital repositories, e.g. an ISO-certified repository;**

***(b)* Digital repositories should be in more than one area of the world and preferably on different continents;**

***(c)* Deposition of printed copies in libraries in more than one area of the world and preferably on different continents is also advisable.**

Article 30

***30.1.* Publication by distribution of electronic material does not constitute effective publication before 1 January 2012.**

***30.2.* An electronic publication is not effectively published if there is evidence associated with or within the publication that it is merely a preliminary version that was, or is to be, replaced by a version that the publisher considers final, in which case only that final version is effectively published.**

30.3. Publication by indelible autograph before 1 January 1953 is effective. Indelible autograph produced at a later date is not effectively published.

30.4. For the purpose of this Article, indelible autograph is handwritten material reproduced by some mechanical or graphic process (such as lithography, offset, or metallic etching).

30.5. Publication on or after 1 January 1953 in trade catalogues or non-scientific newspapers, and on or after 1 January 1973 in seed-exchange lists, does not constitute effective publication.

30.6. The distribution on or after 1 January 1953 of printed matter accompanying exsiccatae does not constitute effective publication.

Note 1. If the printed matter is also distributed independently of the exsiccata, it is effectively published.

30.7. Publication on or after 1 January 1953 of an independent non-serial work stated to be a thesis submitted to a university or other institute of education for the purpose of obtaining a degree is not effectively published unless it includes an explicit statement (referring to the requirements of the *Code* for effective publication) or other internal evidence that it is regarded as an effective publication by its author or publisher.

Note 2. The presence of an International Standard Book Number (ISBN) or a statement of the name of the printer, publisher, or distributor in the original printed version is regarded as internal evidence that the work was intended to be effectively published.

Recommendation 30A

***30A.1.* Preliminary and final versions of the same electronic publication should be clearly indicated as such when they are first issued.**

30A.2. It is strongly recommended that authors avoid publishing new names and descriptions or diagnoses of new taxa (nomenclatural novelties) in ephemeral printed matter of any kind, in particular printed matter that is multiplied in restricted and uncertain numbers, in which the permanence of the text may be limited, for which effective publication in terms of number of copies is not obvious, or that is unlikely to reach the general public. Authors should also avoid publishing new names and descriptions or diagnoses in popular periodicals, in abstracting journals, or on correction slips.

30A.3. To aid availability through time and place, authors publishing nomenclatural novelties should give preference to periodicals that regularly publish taxonomic articles. **Otherwise, a copy of a publication (whether published as printed or electronic matter) should be sent to an indexing centre appropriate to the taxonomic group, and publications that exist only as printed matter** should be deposited in at least ten, but preferably more, botanical or other generally accessible libraries throughout the world.

30A.4. Authors and editors are encouraged to mention nomenclatural novelties in the summary or abstract, or list them in an index in the publication.

Article 31

31.1. The date of effective publication is the date on which the printed **or electronic** matter became available as defined in Art. 29 and 30. In the absence of proof establishing some other date, the one appearing in the printed **or electronic** matter must be accepted as correct.

[Existing Note 1 replaced by the following:]

***31.2.* When a publication is issued in parallel electronic and printed versions, these must be treated as effectively published on the same date unless the dates of the versions are different according to Art. 31.1.**

31.3. When separates from periodicals or other works placed on sale are issued in advance, the date on the separate is accepted as the date of effective publication unless there is evidence that it is erroneous.

Recommendation 31A

31A.1. The date on which the publisher or publisher's agent delivers printed matter to one of the usual carriers for distribution to the public should be accepted as its date of effective publication.

BEST PRACTICE

Authors of new names, editors and publishers will all be interested in ensuring that the publications including new names are in accordance with the Melbourne *Code*, so that the names therein are effectively published. We suggest that those publishing in journals or monograph series and books that have online editions communicate with the editors so that best practice can be established across the community as quickly as possible. Many publishers have been carefully addressing the issues involved with the e-publication of novelties for some time (see [3]; guidelines in PLoS One [4]) and considerable interest in making these new *Code* changes function effectively has been apparent.

Some practices that we feel will help with the initial stages of e-publication of novelties that are according to the Melbourne *Code* are:

1) Having each article bear the date of publication prominently (as is done in many journals, for example *New Phytologist* or *Nature*).

2) If an online early version is issued that is not the same as the final version (and thus not the place of effective publication), stamp each article with this fact prominently (for example *American Journal of Botany*).

3) Prominent display of the ISSN or ISBN of the publication on each article will help indexers establish effective publication.

4) Publication in journals (or monograph series) that participate in the CLOCKSS system (see [3] for a description) or another international archive and preservation system will ensure long-term archiving.

5) Authors of new names by electronic means should alert the appropriate indexing center as recommended in Rec. 30A.3 - this will help indexers who may otherwise not be aware of electronically published names.

WHAT THESE CHANGES DO *NOT* MEAN

Although the new Articles and Recommendations use the terms PDF and PDF/A, this does not mean that publications must be issued *only* in that format to be effectively published. For example, some online journals issue papers in Hypertext Markup Language (HTML) format together with a parallel PDF version. In such cases, the PDF version will be effectively published. The stipulation that the General Committee for Botanical Nomenclature will communicate the acceptability of a new international standard format, should PDF ever be succeeded, means authors of novelties and the community using the *Code* can remain informed as to advances in the field and that the *Code* will be protected from obsolescence.

Use of the following means of electronic publication will *not* result in effective publication of novelties under the Melbourne *Code*:

1) Publication on websites or in ephemeral documents available over the Internet (there are strict criteria for granting of ISSNs [5]).

2) Publication in journals without a registered ISSN or e-ISSN.

3) Publication in books without a registered ISBN or e-ISBN.

The Recommendation approved to advise the deposition of a hard copy of any e-publication in a library suggests to botanists an action, but it does not set out standard practice or a protocol for librarians to follow. Librarians are themselves in a complex transition zone between publication modalities [6], and botanists may find librarians to be unwilling or unable to accommodate single hard copy papers as individual accessions should the volume be great.

TWO OTHER IMPORTANT CHANGES TO THE *CODE* RELATING TO THE PUBLICATION OF NAMES

The second change to the *Code* approved in Melbourne to take effect from 1 January 2012 is that the description or diagnosis required for valid publication of the name of a new taxon of all organisms falling under the *Code* may be in either English or Latin. This is the current provision for names of plant fossils, but all new non-fossil taxa have required a Latin description or diagnosis (fungi and plants from 1 January 1935; algae [including cyanobacteria, if treated under the *Code*] from 1 January 1958). This has no bearing on the form of scientific names, which continue to be Latin or treated as Latin. Individual journal requirements for Latin and/or English will, of course, be determined by the editors of those journals.

A third change to the *Code* approved in Melbourne relating to publication of names, but one not taking effect until 1 January 2013 (not 1 January 2012 as reported by [7]), is that all new names of organisms treated as fungi must, as an additional requirement for valid publication, include in the protologue (everything associated with a name at its valid publication) the citation of an identifier issued by a recognized repository (such as MycoBank [8]). This will be publicized separately.

The requirement for a unique identifier for new names of fungi on or after 1 January 2013 does *not* apply to plants or algae; there is no need for authors of new names in these groups to request Life Science Identifiers (LSIDs) - or other identifiers - from indexing centers.

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Changes to the *International Code for Botanical Nomenclature* passed in Melbourne: a lichenological explainer

JAMES C. LENDEMER[1]

ABSTRACT. – A summary of the lichenologically relevant changes to the *International Code for Botanical Nomenclature* passed by the nomenclature session in Melbourne, Australia in July, 2011 is presented. Background for each change is presented as is a summary of the impact of the change on lichenology and lichen nomenclature.

INTRODUCTION

The Nomenclature Section of the 18th International Botanical Congress met in Melbourne, Australia during the week of 18-22 July, 2011. The Section consisted of nearly three hundred delegates representing many facets of the botanical and mycological communities from throughout the world. This diverse body met to discuss and vote on proposed changes to the rules that govern the nomenclature of the organisms covered under the *International Code for Botanical Nomenclature* (i.e., fossil and living plants, bryophytes, fungi, and algae). A remarkable number of the proposals considered during the meeting were relevant to the mycological community, prompting some to term it the "Mycological Section" (Norvell 2011). Indeed broad, sweeping changes to the rules governing the nomenclature of fungi were passed at this meeting. Changes of similar scope were also passed for fossil plants, and the requirements for valid publication of all organisms governed by the *Code*. Even the title of the *Code* was changed, not once, but twice. In light of the many changes passed in Melbourne there has been a proliferation of summary reports for various organismal groups. The present report is an attempt at such a summary of the changes that are likely of most interest to lichenologists and most relevant to lichen nomenclature.

RELEVANT CHANGES PASSED IN MELBOURNE

In this section the text of many proposals, as accepted by the Nomenclature Section in Melbourne, is reproduced in a reduced font size. (For conceptual rather than procedural proposals, the text is not reproduced.) A short explanation of the background context of the proposal and the arguments presented for/against are provided. This is then followed by a brief discussion of how the proposal, as worded when passed in Melbourne, is likely to impact the nomenclature of lichenized fungi.

CHANGE OF THE TITLE OF THE *CODE*

Background. – One of the most noticeable changes to the *Code* that was passed in Melbourne was an alteration of the name from the current *International Code for Botanical Nomenclature* or ICBN. The change was stimulated by a proposal (016, Hawksworth et al. *in Taxon* 58: 659. 2009) to increase mycological visibility in the *Code*. After considerable discussion, and input from the phycological community, the name of the *Code* was changed to the "*International Code of Botanical, Mycological, and*

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[1] JAMES C. LENDEMER – Institute of Systematic Botany, The New York Botanical Garden, Bronx, NY 10458-5126, U.S.A. – e-mail: jlendemer@nybg.org

Phycological Nomenclature". Further discussion over the course of the weeklong session led to the proposal of a more simplified name, with a sleeker acronym, that was passed by the section. The new name for the *Code* is now the *International Code of Nomenclature for algae, fungi, and plants*.

Impact on lichenology. – This change does not have a substantive impact on lichenology or lichen nomenclature. A majority of the mycological community desired increased recognition for fungi in the *Code*, however it is unclear how strongly the lichenological community felt about this issue. Lichens were historically treated as plants rather than fungi, and they continue to be treated by a distinct subset of the mycological community.

ARTS. 7, 8, 10, AND 48.1: TYPIFICATION AND SPELLING OF SANCTIONED NAMES

Background. – The complexities surrounding sanctioned fungal names will not be discussed in detail here because only a small number of the thousands of sanctioned names apply to lichenized fungi. When the Section met in Melbourne there were several different proposals, by different authors, that related to sanctioning, specifically aspects of typification and spelling of epithets. As has been summarized by Norvell (2011), these authors together, with several additional parities, met to resolve their differences and arrive at a unified series of proposals. This was achieved, the originals proposals were withdrawn, and a series of new proposals were made from the floor. These proposals were passed by the Section and are reproduced below.

Impact on lichenology. – Only a handful of lichen names are involved in sanctioning and these were summarized in detail by Hawksworth (1986). The reader should refer to that publication for additional information.

Reword Art. 7.8 and position as Art. 8.1bis:
"*8.1bis.* **The type of a name of a species or infraspecific taxon** adopted in one of the works specified in Art. 13.1(d), and thereby sanctioned (Art. 15), may be **selected from among the elements** associated with the name in **the protologue and/or the sanctioning treatment**."

Add a sentence at the end of Art. 9.2:
"*9.2.* A lectotype is …. **For sanctioned names, a lectotype may be selected from among elements associated with either or both the protologue and the sanctioning treatment.**"

Amend Art. 10.2:
"*10.2.* If in the protologue of the name of a genus or of any subdivision of a genus the holotype or lectotype of one or more previously or simultaneously published species name(s) is definitely included (see Art. 10.3), the type must be chosen (Art. 7.10 and 7.11) from among these types unless**:** **a)** the type was indicated (Art. 22.6, 22.7, 37.1 and 37.3) or designated by the author of the name**; b) the name was sanctioned, in which case the type may also be chosen from among the types of species names included in the sanctioning treatment.** If no type of a previously or simultaneously published species name was definitely included, a type must be otherwise chosen, but the choice is to be superseded if it can be demonstrated that the selected type is not conspecific with any of the material associated with the protologue**or associated with a name in a sanctioning treatment.**"

Amend Art. 10.5:
"*10.5.* The author who first designates a type of a name of a genus or subdivision of a genus must be followed, but the choice may be superseded if *(a)* it can be shown that it is in serious conflict with the protologue**(or, for a sanctioned name, typified under Art. 8.1bis, with the sanctioning treatment)**~~ and another element is available which is not in conflict with the protologue~~, or *(b)* that it was based on a largely mechanical method of selection." [The struck-out text was deleted by the acceptance of Art. 10 Prop. A.]

Add a new Article 48.1bis:
"*48.1bis.* Where a sanctioning author accepted an earlier name but did not include, even implicitly, any element associated with its protologue, or when the protologue did not include the subsequently designated type of the sanctioned name, the sanctioning author is considered to have created a later homonym, treated as conserved under Art. 15.1."

ART. 9: FORMAL INCLUSION OF ISOEPITYPE, ISOLECTOTYPE, AND ISONEOTYPE

Background. – For many, the existence of the terms "isoepitype", "isolectotype", and "isoneotype" to denote duplicates of the respective primary types did not require their mention in the *Code*, particularly as their meaning was implied from the *Code* definitions of isotype etc. This view was not universally held however, and some preferred to use "duplicate of [the respective type]" because those three terms were not specifically defined in the *Code*. Unfortunately, conflict sometimes arose during the publication process when authors, editors, or reviewers with one perspective encountered the other perspective. A proposal (083, Prado et al. *in Taxon* 59: 304. 2010) to formally add these terms to the *Code*, and define them in the glossary, was well received in Melbourne and referred to the editorial committee with minimal debate. Those who wish to use the terms may now do so freely without fear of reprisal.

*Impact on lichenology.–*This change does not substantively impact nomenclature or typification as the status of duplicates of the epitype, lectotype, and neotype remains unchanged. Now, those who use the commonsense shorthand of "iso-" to denote such specimens will be able cite the *Code* to justify their usage.

ART. 16: PUBLICATION OF NAMES ABOVE THE RANK OF FAMILY

Article 16, prop. A (246, Redhead in *Taxon* 59: 1917. 2010) was passed and as such Article 16.1 is amended as follows (new text in **bold**):

> 16.1. The name of a taxon above the rank of family is treated as a noun in the plural and is written with an initial capital letter. Such names may be either **(a) automatically typified names, formed from the genitive singular of a name of an included genus by replacing the genitive singular inflection (Latin -ae, -i, -us, -is; transliterated Greek -ou, -os, -es, -as, or -ous, and its equivalent -eos) with the appropriate termination;** or *(b)* descriptive names, not so formed, which may be used unchanged at different ranks.

Background. – The above changes to Article 16.1 were needed because "some systematists have published ordinal level names in the absence of legitimate familial names, each clearly linked to an included generic name" (Redhead 2010). Though such names do not meet the criteria for valid publication established under Article 16.1(a), they are nonetheless validly published under Article 16.1(b) if considered "descriptive names". The new wording allows names above the rank of family that are derived from a generic name, yet introduced without a corresponding family name, to be automatically typified by the type of the generic name. Some members of the nomenclature section expressed concern that this was creating a special case for names that should have been introduced with a corresponding family, but were not. The response to this was that the Code needed to adapt to current practice, and that increasing numbers of names were being introduced in this manner. It should be noted that no starting date was included in this proposal, and as such it is to be applied retroactively.

Impact on lichenology. – Names introduced above the rank of family that are derived from the legitimate name of an included genus, but without an included legitimate family name, are to be automatically typified by the type of the generic name. Such names are not to be considered "descriptive names"; "descriptive names" are not automatically typified.

ARTS. 29, 30, AND 31: CHANGES TO ALLOW ELECTRONIC ONLY PUBLICATION

Background. – Without a doubt, the passage of new rules allowing the publication of new nomenclatural acts in electronic only serials was the most significant change to the *Code* made in Melbourne. Readers should refer to the summary of these changes by Knapp et al. (2011) published concurrently in this issue of *Opuscula Philolichenum*.

Impact on lichenology. – Effective 1January2012 new nomenclature for lichenized fungi can be validly published in electronic only serials, provided that the conditions outlined by Knapp et al. (2011) are met.

ARTS. 33 & 37: MANDATORY REGISTRATION OF NEW FUNGAL NAMES

Background. – Mandatory registration for the valid publication of new names is an issue that has been extensively debated, and defeated, by previous nomenclature sessions. Regardless, support for this requirement in the mycological community has increased over time, especially as databases such as Index Fungorum and Mycobank have come online. The use of these databases to attach unique identifiers to new names of fungi has now become ubiquitous and is even required by many journals. (Note *Opuscula Philolichenum* is not one of these journals, and rather all names are registered by the editor prior to publication.) Since the mycological community has developed, tested, and implemented a system for the rapid registration of names, many of the logistical arguments against mandatory registration no longer apply. As such, the proposals to require registration of new names of fungi (117 & 119, Hawksworth et al. *in Taxon* 59: 661-662) were passed in Melbourne.

The major concern with this change that was expressed by members of the nomenclature section was that it potentially discriminates against those without access to the internet. The response to this was that the internet is now so widely available throughout the world that it is unlikely a researcher would not have at least minimal access to the internet in some form. One member queried whether it would be possible to physically mail a paper registration to Mycobank. However the Mycobank website does not presently indicate that this is possible. The author of this report contacted Mycobank regarding this issue. In response the managers of Mycobank have begun discussions to find a solution.

Impact on lichenology. – Effective 1January2013 valid publication of all new fungal names will require the citation of a unique identifier. The source of the identifier was not stipulated by the new rules, however it is assumed to be Mycobank. At the time of the publication of this report, Mycobank is the only repository for fungal names that both allows a user to submit new records prior to publication ***and*** automatically generates a unique identifier that is immediately e-mailed to the user. As was noted in Melbourne this functionality is not presently available through Index Fungorum, though it may be in the future.

ART. 36: ENGLISH AS AN ALTERNATIVE TO LATIN FOR VALID PUBLICATION

Background. – One of the issues debated in Melbourne was the proposed elimination of the requirement of a Latin description or diagnosis to effect valid publication of fungal names (186-189, Demoulin in *Taxon* 59: 1611-1612. 2010). Under Demoulin's proposals English would be a permissible alternative to Latin. The proposals were greeted with strong support from the nomenclature section. Although support was not unanimous, it was strong enough that an amendment to extend the change to all organisms covered under the *Code* was passed. As was an amendment to move the starting date for the change forward to 1 January 2012. Many native English speakers will likely be elated by this change. However, those in the non-English speaking world may not be so enthusiastic. Although obtaining aid to translate a description or diagnosis into English is likely an easier task than doing so for Latin at this time, this change nonetheless potentially places non-English speakers at a disadvantage. The Latin requirement was viewed by some as egalitarian because no country, except Vatican City, maintains Latin as an official language.

Impact on lichenology. – Names of new taxa published on or after 1 January 2012 can be validated by a description or diagnosis in ***either** Latin **or** English.* While many workers describing taxa will immediately shed their use of Latin, others are welcome to continue publishing in this language. It is critical to reiterate here that the Latin requirement was not eliminated, but rather was extended to *allow* English as an alternative.

ART. 59 & OTHER PROPOSALS CONCERNING PLEOMORPHIC FUNGI

Background. – A series of proposals concerning the rules allowing dual nomenclature in pleomorphic fungi were presented in Melbourne. This issue has generated considerable debate in the mycological community, including extensive reports and summaries (pro: Hawksworth et al. (2011); con: Gams et al. (2011)). At the core of this issue is the question of whether fungi with different asexual and sexual morphs (anamorphs and teleomorphs) should be allowed to continue to carry different names. Lichens have always been excluded from these rules and thus, lichenologists have never been allowed to apply different names to the sexual and asexual states of the same lichenized fungus. One would logically assume then that any changes to these rules would not impact lichen nomenclature. As is outlined below however, this was not necessarily the case based on the wording passed in Melbourne.

Those in favor of changing the rules allowing dual nomenclature argue that in the age of molecular data the mycological community finally has the tools needed to connect sexual and asexual morphs and unite them under a single name. Indeed, mandating one name for one fungus is logical and reflects biological reality. The argument against changing these rules revolves largely around two issues. First, is the significant destabilizing effect that a return to "one fungus, one name" is likely to have on ascomycete nomenclature. Second is the concern that since the type specimens of many of the names involved cannot be sequenced, the connection made between an anamorph and a teleomorph will rarely be established with absolute certainty.

As has been summarized by Norvell (2011), series of opposing proposals pertaining to dual nomenclature were made prior to Melbourne. Once the nomenclature section began, representatives from both sides of the debate came together and withdrew all of the proposals that had been published prior to the meeting. They then forged three new sets of proposals that were stated to vary in how radically they changed the rules. These were referred to as "Option 1", "Option 2", and "Option 3". So-called "Option 1" was the most radical; a total removal of dual nomenclature effective 1January2013 with a series of additional rules to mediate the effects of this extreme change. Unfortunately, only the text of "Option 1" was distributed to the members in attendance for review, and the existence of "Option 2" and "Option 3" was not mentioned until the floor debate on "Option 1" the following day. (A pdf of the text of "Option 1" distributed in Melbourne can be downloaded at http://sweetgum.nybg.org/webmedia.php?irn=411072.) When the new proposals were brought to the floor late in the afternoon on Thursday the section was informed of the three sets of proposals and immediately began debate on the changes proposed in "Option 1". Presumably this was under the assumption that a similar debate would occur for the other, less extreme options, the content of which was still unknown to the audience. The subsequent events that lead to the end of dual nomenclature were summarized well by Norvell (2011: 483) as "Nonetheless the vote to accept that option was swift and definite, leaving the mycologists in the hall blinking and a bit stunned. With its passage, the two other options were not considered." Regardless of one's perspective of dual nomenclature, and the process by which it will be effectively terminated in 2013, the vote in Melbourne was binding and conclusive.

Impact on lichenology. – As was mentioned above it would be logical to assume that the termination of dual nomenclature has no impact on lichenized fungi because they were always excluded from this provision. While this was certainly the case for the changes to Article 59, it was initially not so for the additional articles that were proposed to mitigate the potential destabilization caused by a return to "one fungus, one name" for pleomorphic fungi. This is because the wording of the additional articles passed in Melbourne applied to all pleomorphic fungi and did not specifically exclude lichens. Since most lichenized fungi (i.e., excluding lichenized basidiomycetes) produce anamorphic and teleomorphic states, they are technically pleomorphic fungi, though the lichenological community does not tend to think of them this way. Thus the new rules governing pleomorphic fungi that did not specifically exclude lichens would have to have been interpreted as covering these organisms. A proposal from the floor on the last day of the nomenclature section rectified this situation and made it clear that lichenized fungi and their allies are exempt from the new rules. Brief discussions of each individual article, and its potential impact on lichen nomenclature in the absence of a special provision excluding lichens, are intercalated into the text of the articles reproduced below.

Replace the entire Article 59 with:

59.1. On and after 1 January 2013, all names of fungi, including fungi with mitotic asexual morphs (anamorphs) as well as a meiotic sexual morph (teleomorph), must conform to all the provisions of this *Code* that are not restricted in application to other groups of organisms or from which names of fungi are not specifically excluded.

Note 1. Previous editions of this *Code* provided for separate names for so called "form-taxa", asexual forms (anamorphs) of certain pleomorphic fungi, and restricted the names applicable to the whole fungus to those typified by a teleomorph. All legitimate fungal names are now treated equally for the purposes of establishing priority, regardless of the life history stage of the type.

59.2. Names published prior to 1 January 2013 for the same taxon of non lichenized*Ascomycota* and *Basidiomycota* with the intent or implied intent of applying to, or being typified by separate morphs (e.g., anamorph, synanamorph or teleomorph) are not considered to be alternative names under Art. 34.2; nor are they to be treated as nomenclaturally superfluous under Art. 52.1. If they are otherwise legitimate, they compete in providing the correct name for the taxon under Art. 11.3 and 11.4.

Impact on lichenology. – The replacement version of Article 59 passed in Melbourne terminates dual nomenclature for pleomorphic fungi effective 1January2013. Lichens continue to be excluded in Article 59.2, as they were in the previous version of Article 59. Thus there is no impact to lichen nomenclature from this change.

Modify Art. 34.2. At the end of the first sentence add "(but see Art.59.2)"
Modify Art. 52.1. After mention of Art. 52.3 add "and 59.2"
Corollaries:
Modify Art. 1.3 by deleting the phrase, "As in the case of form-taxa for asexual forms (anamorphs) of certain pleomorphic fungi (Art. 59),"
Modify Art. 7.4 by deleting reference to Art. 59.6
Modify Art. 7.9 by removing reference to Art. 59 and removing Note 1.
Modify Art. 9.7 by removing, "(but see also Art. 59.7)"
Modify Art 11.1 by removing "form-taxa of fungi and" reference to Art. 59.4 and 59.5.
Modify Art 11.3 by removing reference to Art. 59.
Modify Art. 51.1. Delete the phrase ", or (in pleomorphic fungi with names governed by Art. 59) because the morph represented by its type is not in accordance with that of the type of the generic name."

Impact on lichenology. – The above are housekeeping changes to bring the rest of the *Code* in line with termination of dual nomenclature.

Add to Article 14 (new)

14.n. For organisms treated as fungi under this *Code*, lists of names may be submitted to the General Committee, which will refer them to the Nomenclature Committee for Fungi for examination by subcommittees established by that Committee in consultation with the General Committee and appropriate international bodies. Accepted names on these lists, which become permanent as Appendices XX–YY once reviewed by the Nomenclature Committee for Fungi and the General Committee, are to be listed with their types together with those competing synonyms (including sanctioned names) against which they are treated as conserved. For lists of rejected names see Art. 56.n.

Impact on lichenology. – The scope and impact of "Article 14 (new)" was unclear when passed and depends largely on how it is interpreted by the editorial committee. The intent of the article was to allow "names in current use", a concept that was rejected by previous nomenclature sections (see background and discussion from the St. Louis Congress in Greuter et al. (1990: 114-120)). The article was introduced in the context of "Option 1"; however it was not included in any of the formal proposals pertaining to dual nomenclature made prior to Melbourne. Considering the context of this new article, the nomenclature section likely assumed it applied only to pleomorphic fungi. The original wording, and that passed by the section, were vague however, and potentially extend the reach of the article to other groups of (*all?*) fungi. This is a point that has not been explicated in other summaries pertaining to the changes in Melbourne (e.g., Norvell 2011).

It is relevant to note here that the author of this report proposed a friendly amendment to this article during the debate that would have excluded lichenized fungi. At the time, the proposer questioned why lichens should be covered under this rule when they had never been allowed to follow dual nomenclature. The amendment was rejected by the proposer (Hawksworth). It was then proposed as a general amendment, seconded, and after some debate was rejected by the section. Based on both of these votes it seemed clear that the scope of the new article was not to be limited to names previously treated under the provision of dual nomenclature.

The passage of "Article 14.n[bis]" (see below) by the nomenclature section negates the potential impact of "Article 14 (new)" on lichen nomenclature. It could also be interpreted as a signal to the editorial committee as to the limits of the article that were perceived by the nomenclature section.

Add to Art. 56 (new) [specifically referred to the Editorial Committee for wording and placement]

56.n. For organisms treated as fungi under this *Code*, lists of rejected names may also be included in the Appendices established under Art. 14.n. Such names are to be treated as though rejected outright under Art. 56.1 and may become eligible for use only by conservation under Art. 14.

Impact on lichenology. – “Article 56 (new)” follows directly from the passage of “Article 14 (new)”. There is no impact on lichen nomenclature because of the passage of “Article 14.n[bis]”.

> **Add a new paragraph to Art. 57**
>
> *57.2.* In pleomorphic fungi, in cases where, prior to 1 January 2013, both teleomorph-typified and anamorph-typified names were widely used for a taxon, an anamorph-typified name that has priority must not be taken up until retention of the teleomorph-typified name has been considered by the General Committee and rejected.

Impact on lichenology. – The proposal of “Article 14.n[bis]” was stimulated primarily by the passage of this new paragraph in Article 57.2. The new text conflicts with the proposed equality of anamorph- and teleomorph-typified names for the purpose of priority that was enshrined in the new version of Article 59. Rather, this new text suggests that when anamorph-typified name has priority over a teleomorph-typified name, and both were “widely used”, the anamorph-typified name cannot be used until the matter has been considered and voted on by the General Committee. While the essence of this rule is logical, it creates a situation where the rule of priority cannot automatically be applied. The wording is also vague and leaves in dispute what exactly constitutes “widely used”.

As was the case for the three previous articles, lichenized fungi were not excluded from the new matter in Article 57.2. Apparently this was because the proposer did not consider lichens to be pleomorphic fungi. Of course, most lichens are technically pleomorphic fungi even though lichenologists rarely think of them in this light. For evidence that lichens are pleomorphic one need only to read the previous version of Article 59. Not only were lichens specifically excluded from the provision of dual nomenclature in Article 59.1, but an example was included to illustrate the point that for lichens only one name could be used for one fungus. Interestingly, the example actually represents a case similar to that would be covered under the new text of Article 57.2.Were an anamorph-typified lichen name to have priority over a teleomorph-typified name, and both were well known, then the situation would *a priori* have to be referred to a committee. It is noteworthy that this committee is unlikely to include many lichenologists. This is a relevant point when considering that anamorph-typified names of lichenized fungi are often found “hidden” in non-lichenized groups because the describing author did not recognize the species was lichenized. Would a lichenologist and a mycologist perceive “well known” differently when a name was originally described in a group of fungi considered to be the specialty of the other?

Were the new text of Article 57.2 to apply to lichenized fungi it would also raise the question of what actually represents an anamorph-typified or a teleomorph-typified name. Does the presence of only pycnidia or other conidium-bearing structures on the type denote an anamorph? Similarly, does the presence of only ascomata on the type denote a teleomorph? What about the multitude of names where the type has neither ascospore nor conidium-bearing structures? Thankfully, these questions do not have to be addressed because the passage of “Article 14.n[bis]” excludes lichenized fungi and their allies from the new part of Article 57.2.

> *LICHENIZED FUNGI:*
>
> Subsequent to acceptance of the proposals on fungi with a pleomorphic life cycle, the following modifying proposal was accepted:
>
> *14.n[bis]*. Lichenized fungi, and those fungi traditionally associated with them taxonomically (e.g. *Mycocaliciaceae*, but not lichenicolous fungi), are exempt from the newly accepted provisions in Art. 14.n, 56.n, and 57.2.

Impact on lichenology. – This article was proposed to send a clear message to the editorial committee that the nomenclature section intended for lichenized fungi to be excluded from all of the articles introduced to mitigate the destabilization likely to occur in the aftermath of the termination of dual nomenclature. Specifically the passage of this article seemed necessary in light of the rejection of an amendment to exclude lichenized fungi from “Article 14 (new)”. Dual nomenclature was never applied to lichenized fungi. Thus it is logical that these organisms should be excluded from any special rules that are created to cope with the aftermath of terminating a provision that never applied to them in the first place. The impact of the passage of “Article 14.n[bis]” on lichen nomenclature is effectively to maintain the status quo and insulate names in the group from the new rules that were developed to treat pleomorphic fungi that were previously covered under dual nomenclature.

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